## **ABSTRACT**

This invention is a bicycle crank and pedal assembly with a self-extending and retracting crank arm. The assembly only has three one-piece components that move relative to each other, if the bearings used in friction reduction are ignored. It is simple in design, compact in size and very effective in delivering the benefits of a self-extending and retracting crank arm. In particular, the assembly has (a) the maximum arm length for over 90 degrees of arm directions in the power down stroke and (b) the minimum arm length for close to 90 degrees of arm directions in the return up stroke.